

Attachment A

Community Relations Activities Conducted at the Stamina Mills Superfund Site

<i>14 September 1984</i>	Press Release announcing 24 September public meeting
<i>24 September 1984</i>	Public Meeting announcing availability of bottled water and well test results
<i>27 November 1984</i>	Press Release on alternate water supply and EPA funding
<i>.. February 1986</i>	Press Release announcing 10 March public meeting
<i>.. March 1986</i>	Fact Sheet on start of Remedial Investigation
<i>10 March 1986</i>	Public Meeting on start of Remedial Investigation
<i>.. May 1986</i>	Fact Sheet on progress and continuing activities of Remedial Investigation
<i>.. December 1986</i>	Community Relations Plan completed
<i>.. February 1990</i>	Fact Sheet on results of Remedial Investigation
<i>21 February 1990</i>	Public Meeting on results of Remedial Investigation
<i>29 June 1990</i>	Public Notice of Proposed Plan and Public Comment Period
<i>5 July 1990</i>	Proposed Plan published
<i>10 July 1990</i>	Public Meeting on Proposed Plan and Feasibility Study
<i>31 July 1990</i>	Informal Public Hearing on Proposed Plan and Feasibility Study
<i>11 July 1990 - 9 August 1990</i>	Public Comment Period
<i>28 September 1990</i>	Responsiveness Summary for Record of Decision

Attachment B

Transcript of the 31 July 1990 Informal Public Hearing

1 UNITED STATES OF AMERICA
2 ENVIRONMENTAL PROTECTION AGENCY
3 BOSTON REGION
4

5 In the Matter of:

6 INFORMAL PUBLIC HEARING
7 STAMINA MILLS SUPERFUND SITE
8
9

10 Municipal Annex
11 575 Smithfield Road
North Smithfield, Rhode Island

12 Tuesday
13 July 31, 1990

14 The above entitled matter came on for hearing,
15 pursuant to Notice at 7:35 p.m.
16

17 BEFORE: RICHARD C. BOYNTON
18 NEIL HANDLER
U.S. Environmental Protection Agency
19
20 TERRENCE GRAY
R.I. Department of Environmental Management
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APEX REPORTING
Registered Professional Reporters
(617)426-3077

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PROCEEDINGS

7:35 P.M.

MR. BOYNTON: Good evening. My name is Richard C. Boynton, and I'm the chief of EPA Rhode Island Superfund Section. I have supervisory responsibilities for EPA response actions at Superfund sites in Rhode Island.

Tonight we are here to conduct an informal public hearing, to receive all comments on the Stamina Mills feasibility study and proposed clean up grant for the site.

I will serve as a hearing officer. Also on the hearing panel with me, to my far right Neil Handler, the EPA project manager for the Stamina Mills site. And to my immediate right Terry Gray of the Rhode Island Department of Environmental Management.

I would also like to introduce Jim Sabastian, our Office of Public Affairs Community Relations Coordinator, who is in the rear of the room. And also Nancy Andrews of the Army Corps of Engineers, sitting in the front right.

EPA held an informational meeting on Tuesday evening, July 10th in this room, to present information about the evaluation of alternatives for the clean up of the Stamina Mills site, and the preferred plan for the clean up of the site.

The public comment period began on the next day, July 11, and will run for 30 days, and close on August 9th.

1 Now I would like to describe the hearing format for
2 you. We will begin with a brief presentation by Neil
3 Handler, describing the proposed clean up plan. Following
4 Neil's presentation we will accept all comments, any and all
5 comments you wish to make for the record. The panel may
6 also ask some questions, in order to clarify the comments.

7 We will prepare a written response to each and every
8 comment received tonight, and include the written responses
9 with EPA's final decision.

10 When all comments have been heard I will close
11 tonight's hearing. If you wish to submit written comments,
12 you may submit them until August 9th, to the address on page
13 two of the proposed clean up plan document. Copies of the
14 plan are available at the rear of the room, if you need
15 them.

16 At the conclusion of the hearing please feel free to
17 address any questions you may have about the clean up plan
18 or the decision making process to the EPA representatives
19 that are here tonight.

20 For those of you wishing to make a comment tonight, you
21 should have filled out an index card, available at the rear
22 of the room. If you have not completed a card and wish to
23 make a comment, please see Jim Sebastian at the rear of the
24 room, and complete an index card.

25 I will call upon those who wish to make a comment in

1 the order in which they filled out the index cards. When
2 called upon, please come forward to the microphone on the
3 podium, and state your name and affiliation. I ask you to
4 do this because we are transcribing the hearing for the
5 record, and this will help our recorder to keep an accurate
6 record of the proceedings.

7 If you have a prepared statement with you, please
8 submit it to the panel.

9 The transcript of tonight's hearing will be made
10 available, with the administrative record, at the North
11 Smithfield Public Library at 20 Main Street, and at the EPA
12 Record Center, 90 Canal Street, Boston, Mass. A transcript
13 will be available in one or two weeks after tonight's
14 hearing.

15 As I mentioned, EPA will prepare a response to all
16 written comments received during the comment period, and
17 will include the response summary with a record of decision.

18 Now I'd like to ask Neil to give an over of the
19 proposed clean up plan. Neil.

20 MR. HANDLER: As Dick mentioned, my name is Neil
21 Handler, and I'm the project manager for EPA, for the
22 Stamina Mills Superfund site. And I'd like to briefly
23 describe to you just what the EPA's proposed preferred
24 alternative, which addresses dealing with the clean up of
25 this Stamina Mills Superfund site, is.

1 So I guess the place to start then is just to briefly
2 identify the areas that EPA focused in on during their
3 remedial investigation and feasibility study, and came up
4 with clean up alternatives for.

5 First of all, there are primarily four areas of the
6 site. The first area is a spill area, which was located
7 directly east of the former mill building number one. In
8 that location an unknown quantity of TCE, or
9 trichlorethylene, was spilled.

10 Another area that is addressed as part of this
11 preferred alternative is the landfill area, which is located
12 in the eastern section of the site, adjacent to the Branch
13 River there.

14 And the third area of the site is the overall site
15 itself, which consists of rubble piles, partially standing
16 buildings, deteriorating smokestack adjacent to the river,
17 and two physical structures known as race ways, which run
18 through the site, and used to convey water through the site
19 for hydro-mechanical power.

20 In addition to those three areas, the final area which
21 has been impacted by the site is the groundwater beneath the
22 site, which the TCE which was spilled at the site, ended up
23 infiltrating through the soil, and getting into the bedrock
24 aquifer beneath the site, and ended up being pulled offsite
25 by the pumping action of some of the residential wells north

1 of the site.

2 So, with these areas identified, EPA put together a
3 feasibility study, and from the feasibility study evaluated
4 all the alternatives for the site, and came up with a series
5 of final alternatives that we evaluated in detail. And
6 these alternatives address the different areas that I just
7 mentioned. And I'd like to briefly go through them, to give
8 you some idea of what alternatives we looked at.

9 Just one note. On this overhead you will see that some
10 of the alternatives have a little asterisk next to them, and
11 that's to indicate that those are the proposed preferred
12 alternatives that EPA has previously mentioned, and we're
13 interested in your comments on.

14 For the TCE, or the trichlorethylene spill area, EPA
15 looked at on-site incineration for this area. The final
16 alternatives that were evaluated for this area came down to
17 these two alternatives, and these included the on-site
18 incineration and the soil treatment by vacuum extraction, as
19 well as the no action alternative, which serves as a
20 baseline alternative, which we compare all other
21 alternatives to for that treatment.

22 For the landfilled area, we considered on-site
23 incineration. And again the preferred alternative that is
24 being proposed by EPA is an impermeable cap for the landfill
25 area.

1 In addition, again, for each one of these alternatives,
2 we are required by the statutes to carry through a no-action
3 alternative.

4 For the groundwater at the site, the treatment
5 technologies that EPA evaluated in detail were air-
6 stripping, carbon treatment, and then, again, the proposed
7 preferred alternative was treatment by ultra-violet light
8 and hydrogen peroxide. And then the final, the no-action
9 for the groundwater.

10 For the overall site, in dealing with the buildings and
11 race ways, and the septic tank at the site, the alternatives
12 that EPA considered were to demolish the site structures,
13 seal and fill the race ways, and backfill the race ways. To
14 locate the septic tank and treat its contents, and then
15 grade and seed on the site, and improve the fencing. This
16 was EPA's proposed preferred alternative there.

17 And the other final alternative for dealing with the
18 overall site pretty much follows the first overall site
19 alternative, except in addition we would look at addressing
20 an area where there were some elevated levels of PH's, which
21 are poly-cyclic aromatic hydrocarbons, which are a compound,
22 which we found some elevated levels, in an area adjacent to
23 the dam. And then there is the no-action.

24 So, to briefly summarize EPA's preferred alternative,
25 and what it's attempting to deal with, we have for the

1 trichlorethylene spill area, which has been identified as an
2 area which is the source of contamination to the groundwater
3 beneath the site, as well as off-site. EPA is proposing to
4 use soil treatment by vacuum extraction. And this would
5 consist of installing a number of wells into that area, and
6 then withdrawing the air from the soil, the air that's in
7 contact with the soil, and treating this air, which would
8 contain the compound trichlorethylene.

9 And for the landfill area, EPA is proposing to use an
10 impermeable cap in that area, to prevent the migration of
11 contaminants from the landfill into the Branch River, as
12 well as to reduce the amount of groundwater, which is
13 infiltrating through the landfill, and impacting the
14 groundwater beneath, the site.

15 For the groundwater itself, on-site and off-site, EPA
16 is proposing to install a number of extraction wells, in the
17 vicinity of the site, and the exact number and location will
18 be determined once we've completed a pump test at the site.

19 But this technology, ultra-violet light, and hydrogen
20 peroxide, completely destroys the compounds that we're
21 seeing at the site, and basically would just leave carbon
22 dioxide and water, and chloride salts as the residue from
23 the chlorinated solvents, trichlorethylene and some of its
24 breakdown products, that we are seeing at the site in the
25 groundwater.

1 For the overall site, EPA's preferred alternative
2 considers demolishing all the site structures, sealing and
3 backfilling the race ways, and locating the septic tank at
4 the site, and treating its contents.

5 I guess I should just point out that the septic tank,
6 the reason why we haven't located it, it's beneath one of
7 the large piles of rubble at the site. We believe it's
8 beneath that pile.

9 In addition, once all the activities at the site are
10 completed, we would grade these areas and seed them, and
11 improve the site fencing.

12 And the total cost for the proposed preferred
13 alternative is approximately \$4.3 million.

14 As I said, I briefly just tried to present this. More
15 details can be found in the feasibility study and in the
16 remedial investigation, which are available at the
17 Smithfield Public Library.

18 MR. BOYNTON: Thank you, Neil.

19 Now I would like to begin comments with Terry Gray,
20 representing the Rhode Island Department of Environmental
21 Management.

22 MR. GRAY: Hi. Good evening. My name is Terrance
23 Gray. I'm a principal engineer with the Department's
24 Division of Air and Hazardous Materials.

25 Initially, I would like to state that the Department

1 agrees that EPA's preferred remedial alternatives have
2 addressed the different aspects of site contamination, and
3 will be protective of human health in the environment.

4 We do, however, have some issues which we'd like to see
5 addressed as part of the record of this hearing for the
6 site.

7 Our primary concern is directed at the implementation
8 of the proposed groundwater remediation. The Department
9 agrees that groundwater remedial action should progress
10 toward achieving appropriate groundwater quality standards.

11 In the case of the Stamina Mills site, attainment of
12 drinking water quality standards is our desired initial
13 objective. However, based on the information presented to
14 date, there are many uncertainties associated with the
15 technical feasibility and associated costs of achieving
16 drinking water quality standards in the bedrock aquifer at
17 this site.

18 Specifically, the uncertainties here associated with
19 the technical ability to reach and maintain drinking water
20 quality standards, and the time frame that may be necessary
21 to achieve that clean up goal.

22 We believe the preferred alternative, and record of
23 decision, should reflect these uncertainties by specifically
24 including a performance review to be conducted sometime
25 within five years of the initiation of the chosen

1 groundwater remedy. And an alternate or contingent remedy
2 to be implemented if the performance review indicates that
3 the initiation of the chosen groundwater remedy is not
4 making satisfactory progress towards meeting the remedial
5 objective.

6 This is consistent with language proposed in the RIDEM
7 draft groundwater regulations, which allow for the
8 reclassification of an aquifer, should it become apparent
9 that it is not technical feasible or financially beneficial
10 to continue actively treating the groundwater.

11 Given the aforementioned uncertainties, this Department
12 will commit state resources, provided there is an adequate
13 degree of flexibility to amend clean up goals, as additional
14 information is obtained.

15 We also have specific comments and questions on the
16 alternatives evaluated in the feasibility study in the
17 preferred alternative, included in a letter submitted to the
18 EPA for the administrative record. I have copies of that
19 letter available tonight, if anyone wishes to see one.

20 Thank you.

21 MR. BOYNTON: Thank you, Terry. Now I'd like to call
22 Deming Sherman.

23 MR. SHERMAN: Yes. My name is Deming (spelled
24 D-e-m-i-n-g) Sherman (Sh-e-r-m-a-n). I'm attorney for
25 Kayser Roth Corporation.

1 This evening I have with me Mr. Michael Hauptman
2 (H-a-u-p-t-m-a-n) of the consulting firm of Gerrity and
3 Miller, who has been retained by Kayser Roth Corporation to
4 review the proposed clean up plan, and comment on it.

5 It is our intention tonight for Mr. Hauptman to make
6 certain comments. These comments will be followed by a
7 formal written presentation to the EPA on or before August
8 9, 1990.

9 I wish to state at the outset that Kayser Roth
10 Corporation has been held liable for past and future clean
11 up costs relating to the Stamina Mills site. Kayser Roth
12 has appealed the judgment of the district court in which
13 liability was found, and that appeal is pending.

14 By making the comments tonight, on or before August 9,
15 Kayser Roth Corporation is not in any way conceding its
16 liability for the expenses for this plan. So that these
17 comments are offered without prejudice to our legal position
18 that is being asserted in the courts. However, we thought
19 it would be prudent and useful to present our comments on
20 the proposed plan, despite the fact that the final
21 adjudication is not complete.

22 So, with that caveat, I would like to present Mr.
23 Hauptman, who will make some comments at this point.

24 MR. HAUPTMAN: Thank you. Good evening, everyone. My
25 name is Michael Hauptman from Gerrity Miller, and on behalf

1 of Kayser Roth Corporation I'd like to give you a few
2 technical comments. These are just the highlights. We will
3 be presenting the formal written comments at a later date.

4 First of all, in general, I'd like to say that there
5 are a lot of data gaps in the feasibility study, which we'd
6 like to see filled at some time.

7 Now specifically one of the technologies that was not
8 considered, and we didn't understand why, for the
9 groundwater, was bio-remediation, ex situ bio-remediation,
10 which means you would withdraw the groundwater from the
11 aquifer. And instead of treating it with carbon or with the
12 UV system, you would treat it with a biological reactor.

13 As far as the UV/peroxide, this is where one of the
14 data gaps occurred. We weren't sure why the recommended
15 alternative proceeded with this particular part, because
16 there was only one sample sent to the laboratory in the
17 pilot test. The Tucson Laboratory only performed their
18 testing on one sample.

19 Another aspect to the UV/peroxide system is that there
20 will be pre-treatment required to remove iron and manganese,
21 and other metals occurring naturally. And the feasibility
22 study, as well as the report by the Tucson firm, stated
23 this. But there was no pilot testing or pre-treatment
24 testing done for this. And we feel that the costs may be
25 under-estimated because of that.

1 Moving on to the overall site, the preferred
2 alternative says that the rubble will be carted off-site.
3 And we think that there is really no reason not to put it
4 into the landfill.

5 Another comment, as far as clean up time is concerned.
6 The modelling that was done in the FS was an analytical
7 model. It was very simplistic, and we think that the time
8 was too short, because they used an exponential model that
9 went to zero. In most cases we've seen that those
10 concentrations become asymptotic at some level. And if this
11 level is above ARARs for example, then carbon treatment
12 would have to be continued. And we didn't see this
13 reflected in the cost estimate.

14 As far as turning to the cost estimate, the feasibility
15 study used a ten percent discount factor in calculating the
16 present worth of the operation and maintenance costs. I
17 believe it's true that EPA recommends using a five percent
18 discount factor. The effect of using at ten percent is that
19 the actual cost is much lower -- I mean, the estimate of the
20 actual cost is much lower than it will be.

21 Continuing with the groundwater. The pumping rate that
22 was used in the feasibility study, to determine the clean up
23 time, was at ten gallons a minute. We feel that that is too
24 low for this situation. And again it probably led to a
25 lower cost estimate.

1 The other thing that wasn't considered was potential
2 induced infiltration from the Branch River.

3 Lastly, as far as the carbon treatment of the air
4 emissions, this was eliminated. But it seems that the
5 feasibility study assumes that 100 percent of the emissions
6 for an air stripper would have to be removed. Rhode Island
7 allows a certain amount of emissions, and we thought we
8 would see at least a preliminary risk assessment, as to what
9 the effect would be if some of what was stripped was allowed
10 to enter the atmosphere.

11 And that's all the comments I have. Thank you.

12 MR. BOYNTON: Thank you, Mr. Hauptman. I'd like to
13 call on Gerry Chrisman to make comments.

14 MS. CHRISMAN: I have no comments.

15 MR. BOYNTON: Senator Paul Kelly.

16 MR. KELLY: I'm Senator Paul Kelly. I represent North
17 Smithfield.

18 The comments I have to make are not as technical as the
19 comments we've heard, but they do represent some concerns
20 that the residents have. I'm not sure whether to place
21 these in the form of a question or comment. So I'll try to
22 place them both ways.

23 At the last hearing it was our understanding that the
24 capped wells, that the contaminants that were emanating from
25 the site, had receded back toward the site because the wells

1 had been capped, and the affected homeowners had been tied
2 into the water system.

3 At the time I asked the question, what steps were being
4 taken, or what steps should be taken to assure that these
5 wells are not reactivated, because it was our understanding
6 that night that if these wells were reactivated, that the
7 contaminants could then reactivate themselves. And it was
8 my impression that night that no steps had been taken.

9 So again, gentlemen, I don't know whether to put this
10 in the form of a question or just make it as part of this
11 report.

12 I think the concern on the part of the homeowners
13 surrounding the contaminated sites is what steps would be
14 taken, either by EPA, or DEM, or by the town, that would not
15 cause this site to erupt again.

16 The second is more of a legal question. We have
17 several people in town who spent many thousands of dollars
18 to sink wells. And these aren't wells that have been in
19 existence for twenty years or more, these were new wells.
20 And found that they could not use the wells. They are
21 finding that EPA siting a culprit to pay for the clean up.
22 And from a very local point of view, these people are
23 wondering if there is any way, either as a class, or as
24 individuals, that EPA or DEM could assist them in some sort
25 of ability to recoup their financial losses.

1 Because they sunk wells, and found out that the wells
2 had to be capped, and they couldn't use them. Their out of
3 pocket expenses, from a personal point of view, were
4 proportionately every bit as great as the town, or as EPA is
5 looking at through Kayser Roth.

6 So these are comments that I would like addressed, or
7 at least like to be considered. And if we could receive
8 some answers, as far as what steps would or should be taken,
9 and do the people have any rights to recover losses they
10 had, we'd be more than grateful.

11 MR. BOYNTON: I think we'll hold the questions until
12 after I close the hearing. Thank you, Senator.

13 Lynda Masnyk.

14 MS. MASNYK: My name is Lynda (L-y-n-d-a) Masnyk
15 (M-a-s-n-y-k). And I'm on the town council in North
16 Smithfield.

17 And after reviewing several times the feasibility study
18 that EPA and the preferred alternatives that EPA has come
19 up, not being an expert, and listening to the comments from
20 DEM, I certainly would agree that for both what EPA and DEM
21 hope to achieve in that area, certainly would be covered by
22 the alternative that was chosen.

23 My only problem with the alternative, specifically in
24 the landfill area, is that like the other site that we have,
25 that's a Superfund site in North Smithfield, LR and R, we

1 Smithfield in the future.

2 We have heard that this has not done anything to our
3 particular water source now, that serves the municipal
4 system, but knowing that there is a possibility that the
5 groundwater could be cleaned up in this area, certainly
6 would be the best alternative to me.

7 I notice that all three different alternatives, results
8 are not particularly promised that everything would be
9 cleaned up in the time frame, and it's about the same, 10 to
10 15 years.

11 So, as the gentleman from DEM said, I certainly would
12 like that situation monitored as time goes on.

13 As far as the overall area, one of the comments I made
14 the last time was that the people in this area have been
15 living with the rubble that's present there for quite some
16 time. That particular area of town, as far as the Branch
17 River and the Slatersville Reservoir, could be a beautiful
18 part of North Smithfield, and yet they've had to look at
19 these buildings.

20 So I would certainly hope that that particular part of
21 the clean up is achieved as soon as possible, and we did
22 discuss how long a time frame it would be, as far as
23 beginning this project, and the comment was made that it
24 would be possibly two years.

25 I, as a town council member, would like to see that

1 period speeded up, so that at least the structures on the
2 site would be taken care of, so at least they wouldn't have
3 to look at the buildings they've been looking at for the
4 last fifteen years.

5 MR. BOYNTON: Thank you. Are there any further
6 comments for the record? Does the hearing panel have any
7 comments they wish to make?

8 Thank you for attending this hearing, and for your
9 comments. I'd like to remind you that EPA will accept
10 written comments postmarked before August 9th at the address
11 in the proposed plan.

12 Also, if you have any questions about the decision-
13 making process, you can call Jim Sebastian. Jim's phone
14 number and address are in the proposed plan.

15 Thank you again for your comments and for attending the
16 hearing. This hearing is closed.

17 (Whereupon, the hearing in the above captioned matter
18 ended at 8:05 P.M.)
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25

CERTIFICATE OF REPORTER AND TRANSCRIBER

This is to certify that the attached proceedings
before: U.S. ENVIRONMENTAL PROTECTION AGENCY

in the Matter of:

INFORMAL PUBLIC HEARING
STAMINA MILLS SUPERFUND SITE

Place: North Smithfield, Rhode Island

Date: July 31, 1990

were held as herein appears, and that this is the true,
accurate and complete transcript prepared from the notes
and/or recordings taken of the above entitled proceeding.

Lester Marshak
Reporter

8/10/1990
Date

Pamela Sullivan
Transcriber

8/10/1990
Date

APEX REPORTING
Registered Professional Reporters
(617) 426-3077

APPENDIX D
STATE CONCURRENCE



State of Rhode Island and Providence Plantations
Department of Environmental Management
Office of the Director
9 Hayes Street
Providence, RI 02908

27 September 1990

Ms. Julie Belaga
Regional Administrator
Environmental Protection Agency
John F. Kennedy Federal Building
Boston, MA 02203

Dear Ms. Belaga:

The purpose of my writing is to express the State of Rhode Island's concurrence with the remedy detailed in the Record of Decision, dated 28 September 1990, for the Stamina Mills Superfund site.

This concurrence is based upon all aspects of the abovementioned Record of Decision being adequately addressed and implemented during the design, construction and operation of the remedy. The Department wishes to particularly emphasize the following aspects of the Record of Decision:

The remedy as proposed and implemented must meet all applicable and relevant and appropriate State and federal statutes, regulations and policies.

The ground water remedial objective is to restore the ground water to federal and state drinking water quality standards as rapidly as possible. Should the clean up objective not be met within ten years of the implementation of the remedy, EPA will reevaluate the technical feasibility and associated costs of continuing the remedial action. Based upon that evaluation, EPA will consider making changes in the remedy.

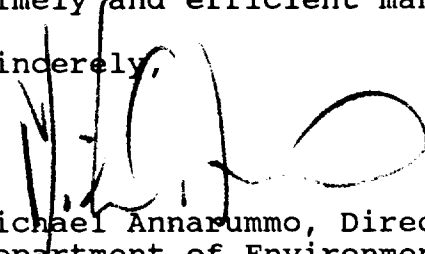
In order to maintain the overall protection of human health and the environment believed to be afforded by the remedy, institutional controls, in the form of deed restrictions regulating land use, will have to be implemented. These institutional controls, which are necessary to protect the long-term integrity of the remedy, must be put in place prior to the completion of construction of the remedy. This Department cannot unilaterally impose the necessary controls on a landowner. Also, it is the Department's understanding

that should the installation or operation of any off-site wells adversely impact the operation of any portion of the remedy, the EPA will take action within the scope of their authority to correct the problem.

Also included with this letter are the State Acceptance sections for each of the four areas of the site. Please include these sections in the final Record of Decision.

Finally, I urge EPA to make every effort to ensure that the responsible parties in this case will implement the remedy in a timely and efficient manner.

Sincerely,



Michael Annarummo, Director
Department of Environmental Management

cc: Merrill Hohman, Director, EPA Waste Management Division
Richard Boynton, EPA, RI Superfund Section
James Fester, Assistant Director for Regulation
Thomas Getz, Chief, Division of Air and Hazardous Materials
Claude Cote, Esq., Office of Legal Services

State Acceptance(TSA-3): The Rhode Island Department of Environmental Management (RI DEM) concurs with the selection of a soil vacuum extraction system as the source control alternative for the TCE spill area.

State Acceptance(LA-3): The Rhode Island Department of Environmental Management (RI DEM) would have preferred excavation and off-site disposal of the material found in the landfill. However the Department understands the uncertainty as to whether any or all of that material is actually hazardous waste and, if so, the corresponding difficulty and expense in disposing of those materials.

RI DEM concurs with the selection of a multi-layer cap and leachate collection system, with institutional controls in place, as the source control alternative for the Landfill area. RI DEM has informed the EPA that the Department cannot unilaterally impose the institutional controls necessary to protect the integrity of the landfill.

State Acceptance(GW-4): The Rhode Island Department of Environmental Management (RI DEM) concurs with the selection of a UV/Hydrogen Peroxide treatment system as the management of migration alternative for the ground water. It is estimated that this alternative should achieve the clean up levels after ten to fifteen years of operation. The Department is concerned, however, with the uncertainties associated with the technical feasibility and associated costs of achieving drinking water standards in the

bedrock aquifer at the site. RI DEM has emphasized, as specified in the Record of Decision, that periodic reviews be conducted to evaluate the performance of the system and, the feasibility and cost effectiveness of continued operation of the system in achieving the clean up levels. Revisions to the remedy should be made as necessary.

State Acceptance(OS-3): The Rhode Island Department of Environmental Management (RI DEM) concurs with the selection of the combination of demolition of the remaining structures on the site, sealing of the remaining raceways, location and removal of the septic tank and final site grading as the management of migration alternative selected for the overall site. The Department has raised concerns about potential routes of migration through the sewer line trench and through potentially uncollapsed sections of the raceway underneath the landfill. This issue will be further evaluated during the predesign, design and operation of the remedy

APPENDIX E
ADMINISTRATIVE RECORD INDEX

Stamina Mills
NPL Site Administrative Record

Index

Compiled: February 12, 1990
Updated: July 10, 1990
ROD Signed: September 28, 1990

Prepared for
Region I
Waste Management Division
U.S. Environmental Protection Agency

With Assistance from
AMERICAN MANAGEMENT SYSTEMS, INC.
One Kendall Square, Suite 2200 • Cambridge, Massachusetts 02139 • (617) 577-9915

Introduction

This document is the Index to the Administrative Record for the Stamina Mills National Priorities List (NPL) site. Section I of the Index cites site-specific documents, and Section II cites guidance documents used by EPA staff in selecting a response action at the site.

The Administrative Record is available for public review at EPA Region I's Office in Boston, Massachusetts, and at the North Smithfield Public Library, 20 Main Street, Slatersville, Rhode Island 02895. Questions concerning the Administrative Record should be addressed to the EPA Region I site manager.

The Administrative Record is required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA).

Section I

Site-Specific Documents

ADMINISTRATIVE RECORD INDEX

for the

Stamina Mills NPL Site

1.0 Pre-Remedial

Please refer to the 1984 - 1985 Removal Administrative Record for additional documents which are included in this section by reference only.

1.18 FIT Technical Direction Documents (TDDs) and Associated Records

1. Letter Report from Mark Radville, NUS Corporation to Donald Smith, EPA Region I (July 28, 1986). Concerning Halliwell Boulevard Site Discovery.

2.0 Removal Response

Please refer to the 1984 - 1985 Removal Administrative Record for additional documents which are included in this section by reference only.

2.4 Pollution Reports (POLREPs)

1. POLREP 1, EPA Region I (August 28, 1990).

2.5 On-Scene Coordinator Reports

1. "On-Scene Coordinator's Report," EPA Region I (March 6, 1990).

3.0 Remedial Investigation (RI)

Please refer to the 1984 - 1985 Removal Administrative Record for additional documents which are included in this section by reference only.

3.2 Sampling and Analysis Data

1. "Attachment 1 - Final Volatile Organics Sampling and Analytical Plan," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (August 14, 1987).
2. "Memorandum Report on Results of Ambient Air Monitoring for Volatile Organics," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (January 29, 1988).

The map associated with the record cited in entry number 3 is oversized and may be reviewed, by appointment only, at EPA Region I, Boston, Massachusetts.

3. "Report of Pump Test of the Forestdale Water Association Well," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (March 1989).

3.4 Interim Deliverables

1. "Final - Site Operations, QA/QC and Site Health and Safety Plans," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (April 1986).
2. "Report of the Assessment of Soil and Groundwater Conditions in the Landfill Area," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (April 1989).

3.5 Applicable or Relevant and Appropriate Requirements (ARARs)

1. Cross-Reference: Letter from James Fester, State of Rhode Island Department of Environmental Management to Merrill S. Hohman, EPA Region I (June 7, 1990). Concerning transmittal of the attached Applicable or Relevant and Appropriate Requirements identified by the State of Rhode Island [Filed and cited as entry number 1 in 4.5 Applicable or Relevant and Appropriate Requirements (ARARs)].

3.6 Remedial Investigation (RI) Reports

1. "Remedial Investigation Report - Volume I - Main Text," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (January 1990).
2. "Remedial Investigation Report - Volume IIA - Appendices," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (January 1990).
3. "Remedial Investigation Report - Volume IIB - Appendices," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (January 1990).
4. "Remedial Investigation Report - Volume III - Presentation of Analytical Data," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (January 1990).

3.7 Work Plans and Progress Reports

1. Letter from Robert F. Smart for S.L. Carlock, U.S. Army Corps of Engineers to John Hartley, Rhode Island Department of Environmental Management (July 24, 1985). Concerning the attached Trip Report on a Visit to Stamina Mills, Randy Petersen, U.S. Army Corps of Engineers (June 12, 1985).
2. "Additional Field and Laboratory Work Beyond the Existing Scope of the Final RI/FS Work Plan dated March 18, 1986," GHR Engineering Associates, Inc. (September 15, 1987).

3.10 Endangerment Assessments

1. "Endangerment Assessment - Revised Phase II Draft Final Report," GCA Corporation (July 1985).

4.0 Feasibility Study (FS)

4.1 Correspondence

1. Memorandum from Karen J. Wilson, EPA Region I to Neil Handler, EPA Region I (May 31, 1990). Concerning ground water classification.
2. Memorandum from Stephen Mangion, EPA Region I to Neil Handler, EPA Region I (May 31, 1990). Concerning evaluation of the soil clean-up level.
3. Memorandum from Maureen R. McClelland, EPA Region I to Neil Handler, EPA Region I (June 22, 1990). Concerning review of the "hot spot" area soil sample results.

4.5 Applicable or Relevant and Appropriate Requirements (ARARs)

1. Letter from James Fester, State of Rhode Island Department of Environmental Management to Merrill S. Hohman, EPA Region I (June 7, 1990). Concerning transmittal of the attached Applicable or Relevant and Appropriate Requirements identified by the State of Rhode Island.

4.6 Feasibility Study (FS) Reports

Reports

1. "Feasibility Study Report," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (June 29, 1990).
2. "Feasibility Study Report - Appendices," GHR Engineering Associates, Inc. for U.S. Army Corps of Engineers (June 29, 1990).
3. Letter from Lloyd Selbst, EPA Region I to Beulah Richer (July 10, 1990). Concerning attached addendum to the Feasibility Study Report.

Comments

Comments on the Feasibility Study received by EPA Region I during the formal public comment period are filed and cited in 5.3 Responsiveness Summaries.

4.9 Proposed Plans for Selected Remedial Action

Reports

1. "EPA Proposes Cleanup Plan to Address Contamination at the Stamina Mills Superfund Site," EPA Region I (July 1990).

Comments

Comments on the Proposed Plan received by EPA Region I during the formal public comment period are filed and cited in 5.3 Responsiveness Summaries.

5.0 Record of Decision (ROD)

5.1 Correspondence

1. Memorandum from Don R. Clay, EPA Headquarters to EPA Regions I-X Regional Administrators (January 29, 1990). Concerning the twenty-first remedy delegation report authorizing EPA Region I to proceed with a 1990 Record of Decision for the Stamina Mills NPL site.
2. "Field Investigation Report," State of Rhode Island Department of Environmental Management (July 5, 1990).
3. Letter from Susan C. Svirskey, EPA Region I to Neil Handler, EPA Region I (July 9, 1990). Concerning comments on the Ecological Risk Assessment.
4. Memorandum from Mark D. Sprenger, EPA Environmental Response Branch to Neil Handler, EPA Region I (August 22, 1990). Concerning the attached "Analytical Report," Roy F. Weston, Inc. (June 15, 1990).
5. Letter from Edward F. Sanderson, Historical Preservation Commission to Lloyd Selbst, EPA Region I (August 28, 1990). Concerning impact of the remedy on listing of the site on the National Register of Historic Places.
6. Letter from Gordon E. Beckett, U.S. Department of the Interior Fish and Wildlife Service to Neil Handler, EPA Region I (September 19, 1990). Concerning comments on 1990 "Draft Record of Decision."
7. Memorandum from Neil Handler, EPA Region I to File (September 27, 1990). Concerning procedures used by Region I to calculate soil cleanup levels.

5.3 Responsiveness Summaries

1. Cross-Reference: Responsiveness Summary, EPA Region I (September 28, 1990) [Filed and included as Appendix C in entry number 1 in 5.4 Record of Decision (ROD)].

The following citations indicate written comments received by EPA Region I during the formal public comment period.

2. Cross-Reference: Transcript, Informal Public Hearing Summary, EPA Region I (July 31, 1990) [Filed and included in Appendix C in entry number 1 in 5.4 Record of Decision (ROD)].
3. Comments Dated July 31, 1990 from James Fester, State of Rhode Island Department of Environmental Management on the July 1990 "EPA Proposes Cleanup Plan to Address Contamination at the Stamina Mills Superfund Site," EPA Region I.
4. Letter from Bruce H. Edelson, Kayser-Roth Corporation to Neil Handler, EPA Region I (August 8, 1990). Concerning transmittal of the attached August 1990 "Review of Remedial Investigation and Feasibility Study Reports for the Stamina Mills Site," Geraghty & Miller, Inc. for Kayser-Roth Corporation.

5.4 Record of Decision (ROD)

1. Record of Decision, EPA Region I (September 28, 1990).

11.0 Potentially Responsible Party (PRP)

11.9 PRP-Specific Correspondence

1. Letter from Merrill S. Hohman, EPA Region I to James I. Spiegel, Kayser-Roth Corporation (September 19, 1984). Concerning notice of potential liability.
2. Letter from Merrill S. Hohman, EPA Region I to Henry Richards, Hydro-Manufacturing, Inc. (October 23, 1984). Concerning notice of potential liability.

13.0 Community Relations

Please refer to the 1984 - 1985 Removal Administrative Record for additional documents which are included in this section by reference only.

13.1 Correspondence

1. Memorandum from Wendy Rundle, ICF Corporation to Patty D'Andrea, Susan Patz and Debra Prybyla, EPA Region I (March 14, 1986). Concerning community relations on-site discussions.

13.2 Community Relations Plans

1. "Final Community Relations Plan," ICF Corporation (December 15, 1986).

13.3 News Clippings/Press Releases

News Clippings

1. "N. Smithfield Hoping DEM Won't Levy Fines," The Woonsocket Call - Woonsocket, RI (December 23, 1989).
2. "Meeting Will Air Stamina Mills Contamination," The Woonsocket Call - Woonsocket, RI (February 14, 1990).
3. "Investigation Confirms Contamination Of Ground Water, Soil Near Stamina Site," Evening Bulletin - Providence, RI (February 16, 1990).
4. "Investigation Confirms Contamination Of Ground Water, Soil Near Stamina Site," The Providence Journal - Providence, RI (February 16, 1990).
5. "Residents Near Stamina Shouldn't Use Wells," The Woonsocket Call - Woonsocket, RI (February 22, 1990).
6. "Stamina Cleanup May Take 5 Years," The Woonsocket Call - Woonsocket, RI (February 22, 1990).
7. "Tainted Wells May Never Be Safe, EPA Says," Evening Bulletin - Providence, RI (February 22, 1990).
8. "The United States Environmental Protection Agency Invites Public Comment On The Proposed Plan and Feasibility Study For The Stamina Mills Superfund Site in North Smithfield, Rhode Island," The Woonsocket Call - Woonsocket, RI (July 2, 1990).
9. "Showing The Stamina For Cleanup," The Observer - Greenville, RI (July 5, 1990).
10. "Agency Seeks Input On Cleanup," The Evening Bulletin - Providence, RI (July 6, 1990).
11. "Agency Seeks Input On Cleanup," The Providence Journal - Providence, RI (July 6, 1990).
12. "EPA To Discuss \$4.3 Million Plan For Stamina Mills Superfund Cleanup," The Woonsocket Call - Woonsocket, RI (July 10, 1990).
13. "Stamina Mills Cleanup May Be Delayed Two Years," The Woonsocket Call - Woonsocket, RI (July 11, 1990).
14. "Residents Want Action On Cleanup Of Toxic-Waste Site," The Providence Journal - Providence, RI (July 11, 1990).
15. "Cleanup Of Toxic Waste Under Way At Stamina," The Woonsocket Call - Woonsocket, RI (August 18, 1990).

Press Releases

16. "Public Meeting Announced on Stamina Mills Hazardous Waste Site," EPA Region I (September 14, 1984).
17. "Environmental News," EPA Region I (November 27, 1984). Concerning U.S. Environmental Protection Agency announcement that it has allocated \$700,000 from Superfund to provide an alternate water supply to residents of the Stamina Mills area of Forestdale.
18. "Public Meeting to Explain Plans for the Stamina Mills Superfund Site Announced," EPA Region I (February 24, 1986).
19. "Environmental News - EPA to Hold Meeting on Stamina Mills Cleanup Plan," EPA Region I (June 26, 1990).
20. "EPA Selects Cleanup Plan at Stamina Mills Superfund Site," EPA Region I (September 28, 1990).

13.4 Public Meetings

1. EPA Region I Attendance List, Public Hearing for the Stamina Mills Superfund Site (September 24, 1984).
2. EPA Region I Meeting Agenda, Public Meeting for the Stamina Mills Superfund Site (March 10, 1985). Concerning overview of Superfund program and schedule of events for the site.
3. "Final Public Meeting Summary," Camp Dresser & McKee Inc. (April 4, 1986).
4. Letter from Richard K. Quateman, ICF Kaiser Engineers to James Sebastian, EPA Region I (April 19, 1990). Concerning transmittal of the attached February 21, 1990 "Summary of the Public Informational Meeting on the Remedial Investigation and Risk Assessment."
5. EPA Region I Meeting Notes, Public Meeting for the Stamina Mills Site (July 10, 1990). Concerning release of the Proposed Plan and Feasibility Study.
6. Cross-Reference: Transcript, Informal Public Hearing Summary, EPA Region I (July 31, 1990) [Filed and included in Appendix C in entry number 1 in 5.4 Record of Decision (ROD)].

13.5 Fact Sheets

1. "Superfund Program Fact Sheet - Stamina Mills Site," EPA Region I (March 1986). Concerning remedial investigation and feasibility study activities to be carried out by EPA.
2. "Stamina Mills Superfund Site - Progress and Plans," EPA Region I (May 1986). Concerning EPA activities and investigations underway at the site.

16.0 Natural Resource Trustee

16.4 Trustee Notification Form and Selection Guide

1. Letter from Merrill S. Hohman, EPA Region I to William Patterson, U.S. Department of the Interior (June 17, 1987) with attached trustee notification form. Concerning notification of potential damage to natural resources at the site.

16.5 Technical Issue Papers

1. Letter from Robert Pavia, U.S. Department of Commerce National Oceanic and Atmospheric Administration to Dennis P. Gagne, EPA Region I (May 17, 1990). Concerning transmittal of the attached May 17, 1990 "National Oceanic and Atmospheric Administration Preliminary Natural Resource Survey."

17.0 Site Management Records

Please refer to the 1984 - 1985 Removal Administrative Record for documents which are included in this section by reference only.

Section II

Guidance Documents

GUIDANCE DOCUMENTS

EPA guidance documents may be reviewed at EPA Region I, Boston, Massachusetts.

General EPA Guidance Documents

1. U.S. Environmental Protection Agency. Office of Research and Development. Municipal Environmental Research Laboratory. Biodegradation and Treatability of Specific Pollutants (EPA-600/9-79-034), October 1979.
2. U.S. Environmental Protection Agency. Office of Research and Development. Municipal Environmental Research Laboratory. Carbon Adsorption Isotherms for Toxic Organics (EPA-600/8-80-023), April 1980.
3. U.S. Environmental Protection Agency. Office of Water and Waste Management. Evaluating Cover Systems for Solid and Hazardous Waste, 1980.
4. U.S. Environmental Protection Agency. Office of Research and Development. Municipal Environmental Research Laboratory. Handbook for Evaluating Remedial Action Technology Plans (EPA-600/2-83-076), August 1983.
5. U.S. Environmental Protection Agency. Office of Ground-Water Protection. Ground-Water Protection Strategy, August 1984.
6. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response, Office of Emergency and Remedial Response, and Office of Research and Development. Review of In-Place Treatment Techniques for Contaminated Surface Soils - Volume 1: Technical Evaluation (EPA-540/2-84-003a), September 1984.
7. "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Final Rule and Interim Final Rule and Proposed Rule" (40 CFR Part 136), October 26, 1984.
8. U.S. Environmental Protection Agency. Office of Research and Development. Guide for Decontaminating Buildings, Structures, and Equipment at Superfund Sites (EPA-600/2-85/028), March 1985.
9. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Hazardous Response Support Division. Standard Operating Safety Guides, November 1984.
10. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Guidance Document for Cleanup of Surface Tank and Drum Sites (OSWER Directive 9380.0-3), May 28, 1985.
11. U.S. Environmental Protection Agency. Office of Research and Development. Environmental Research Laboratory. EPA Guide for Minimizing the Adverse Environmental Effects of Cleanup of Uncontrolled Hazardous Waste Sites, (EPA-600/8-85/008), June 1985.
12. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Guidance on Feasibility Studies under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) (EPA/540/G-85/003, OSWER Directive 9355.0-05C), June 1985.

13. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Guidance on Remedial Investigations under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) (EPA/540/G-85/002, OSWER Directive 9355.0-06B), June 1985.
14. Memorandum from Gene Lucero to the U.S. Environmental Protection Agency, August 28, 1985 (discussing community relations at Superfund Enforcement sites).
15. U.S. Environmental Protection Agency. Office of Waste Programs Enforcement. The Endangerment Assessment Handbook, August 1985.
16. U.S. Environmental Protection Agency. Office of Waste Programs Enforcement. Toxicology Handbook, August 1985.
17. U.S. Department of Health and Human Services. National Institute for Occupational Safety and Health, and Occupational Safety and Health Administration. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, October 1985.
18. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Handbook of Remedial Action at Waste Disposal Sites (EPA/625/6-85/006), October 1985.
19. U.S. Environmental Protection Agency. Office of Research and Development. Hazardous Waste Engineering Research Laboratory. Handbook: Remedial Action at Waste Disposal Sites (Revised) (EPA/625/6-85/006), October 1985.
20. "National Oil and Hazardous Substances Pollution Contingency Plan," (40 CFR Part 300), November 20, 1985.
21. U.S. Environmental Protection Agency. Office of Research and Development. Hazardous Waste Engineering Research Laboratory. Handbook for Stabilization/Solidification of Hazardous Wastes (EPA/540/2-86/001), June 1986.
22. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Draft Guidance on Remedial Actions for Contaminated Groundwater at Superfund Sites (OSWER Directive 9283.1-2), September 20, 1986.
23. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response and Office of Emergency and Remedial Response. Mobile Treatment Technologies for Superfund Wastes (EPA 540/2-86/003 (f)), September 1986.
24. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, amended October 17, 1986.
25. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Superfund Public Health Evaluation Manual (OSWER Directive 9285.4-01), October 1986.
26. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Superfund Federal-Lead Remedial Project Management Handbook (EPA/540/G-87/001, OSWER Directive 9355.1-1), December 1986.
27. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Superfund State-Lead Remedial Project Management Handbook, (EPA/540/G-87/002), December 1986.

28. U.S. Environmental Protection Agency. Office of Research and Development. Hazardous Waste Engineering Research Laboratory. Technology Briefs: Data Requirements for Selecting Remedial Action Technology (EPA/600/2-87/001), January 1987.
29. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Data Quality Objectives for Remedial Response Activities: Development Process (EPA/540/G-87/003), March 1987.
30. Letter from Lee M. Thomas to James J. Florio, Chairman, Subcommittee on Consumer Protection and Competitiveness, Committee on Energy and Commerce, U.S. House of Representatives, May 21, 1987 (discussing EPA's implementation of the Superfund Amendments and Reauthorization Act of 1986).
31. Memorandum from J. Winston Porter to Addressees ("Regional Administrators, Regions I-X; Regional Counsel, Regions I-X; Director, Waste Management Division, Regions I, IV, V, VII, and VIII; Director, Emergency and Remedial Response Division, Region II; Director, Hazardous Waste Management Division, Regions III and VI; Director, Toxics and Waste Management Division, Region IX; Director, Hazardous Waste Division, Region X; Environmental Services Division Directors, Region I, VI, and VII"), July 9, 1987 (discussing interim guidance on compliance with applicable or relevant and appropriate requirements).
32. Memorandum from David P. Ryan, EPA Headquarters to Addressees (Assistant Regional Administrators; Management Division Directors; Senior Budget Officers; Regional Comptrollers; Waste Management Division Directors; ESD Directors of Regions I, VI, and VII; Director, Office of Emergency and Remedial Response; Director, Office of Waste Programs Enforcement; Financial Management Officers), July 15, 1987 (Discussing determination of indirect costs in Superfund Removal project ceilings (Comptrollers Policy Announcement No. 87-15)).
33. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Alternate Concentration Limits Guidance (OSWER Directive 9481.00-6C, EPA/530-SW-87-017), July 1987.
34. U.S. Environmental Protection Agency. Office of Health and Environmental Assessment. A Compendium of Technologies Used in the Treatment of Hazardous Waste (EPA/625/8-87/014), September 1987.
35. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Draft Guidance on CERCLA Compliance with Other Laws Manual (OSWER Directive 9234.1-01), November 25, 1987.
36. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. A Compendium of Superfund Field Operations Methods (EPA/540/P-87/001, OSWER Directive 9355.0-14), December 1987.
37. U.S. Environmental Protection Agency. Office of Research and Development. Treatment Potential for 56 EPA Listed Hazardous Chemical in Soils (EPA-600/6-88-001), February 1988.
38. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Draft Guidance on Conducting Remedial Investigations and Feasibility Studies under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act), March 1988.
39. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Draft Guidance on Remedial Actions for Contaminated Groundwater at Superfund Sites (OSWER Directive 9283.1-2), April 1988.

40. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Community Relations in Superfund: A Handbook (Interim Version) (EPA/HW-6, OSWER Directive 9230.0-3A), June 1988.
41. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Draft Guidance on CERCLA Compliance with Other Laws Manual - Part I (EPA/540/G-89/006), August 1988.
42. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Interim Final Guidance on Conducting Remedial Investigations and Feasibility Studies under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act), October 1988.
43. U.S. Environmental Protection Agency. Office of Research and Development. Site Program Demonstration Test Terra Vac In Situ Vacuum Extraction System, Groveland, Massachusetts - Technology Evaluation Report (EPA/540/5-89/003a), April 1989.
44. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Final Covers on Hazardous Waste Landfills and Surface Impoundments (EPA/530-SW-89-047), July 1989.
45. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Draft Guidance on CERCLA Compliance with Other Laws Manual - Part II (EPA/540/G-89/009, OSWER Directive 9234.1-02), August 1989.
46. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Determining Soil Response Action Levels Based on Potential Contaminant Migration to Ground Water: A Compendium of Examples (EPA/540/2-89/057), October 1989.
47. U.S. Environmental Protection Agency. Office of Research and Development. Site Program Demonstration of the Ultrox International Ultraviolet Radiation/Oxidation Technology - Technology Evaluation Report (EPA/540/5-89/012), January 1990.
48. "National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule" (40 CFR Part 300), March 8, 1990.
49. U.S. Environmental Protection Agency. Office of Research and Development. Basics of Pump-and-Treat Ground-Water Remediation Technology (EPA/600/8-90/003), March 1990.
50. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Personnel Protection and Safety.